

## **REMARKS**

In the Office Action of January 16, 2008, claims 1-3, 5-22 and 24-38 were rejected under 35 U.S.C. 101 as directed to non-statutory subject matter. Claims 1-3, 5-22 and 24-38 were also rejected under 35 U.S.C. 112, second paragraph, as indefinite.

Independent claims 1 and 20 have been amended to specify receiving asset price data for a first asset, receiving current system position information for the first asset, receiving quote request information for the first asset and calculating target position information for the first asset. Many of the dependent claims have also been amended to refer to the first asset. These changes are believed to clarify the relation between the asset price data, the quote request, the current system position and the target system position and remove any objections to the claims as being vague or unclear.

With respect to the Examiner's remaining objections as to vagueness, it is respectfully submitted that the term "position" is well understood by those of ordinary skill in financial markets and that terms such as current position and target position are likewise well understood. While trading models do indeed provide different outputs for different inputs, that is to be expected and is intended. And while different trading models will produce different results, that also is to be expected and is intended. This, however, does not make the claim vague or unclear. It merely indicates that there will be variation in the target position that is calculated.

With respect to the Examiner's objection to step (e) of claims 1 and 20, it is respectfully submitted that numerous hedging methods can be used in the calculation of the bid/ask quote. Several of these methods are recited in the dependent claims. Since different hedging methods can be used, it is believed appropriate to refer to the hedging methods generically in claims 1 and 20.

The rejection of the claims under 35 U.S.C. 101 is not understood. In the previous Office Action of March 25, 2005, the Examiner indicated that the rejection of claims 1-19 under 35 U.S.C. 101 could be overcome by reciting that the steps of these claims are performed by a server or processor. Accordingly, claim 1 was amended to recite "A method performed by a computer . . ." The Examiner further indicated that the rejection of claims 20-38 under 35 U.S.C. 101 could be overcome by replacing the recitation of computer software with language such as "as computer-readable medium having stored instructions or computer code executable

by a computer performing the process steps.” Accordingly, claim 20 was amended to recite “A computer-readable medium having computer code executable by a computer for . . .”

The Examiner’s indications in his Office Action of March 25, 2005 remain the law. In In re Comiskey, 499 F.3d 1365, 84 USPQ 2d 1670 (Fed. Cir. 2007), claims were presented directed to a method for mandatory arbitration resolution. Some claims such as claims 1 and 32 were conceded by Comiskey not to require the use of a machine. These claims were found to claim non-patentable subject matter. 84 USPQ 2d at 1679-80. Other claims, such as claims 17 and 46, recited the use of modules and a database. Under the broadest reasonable interpretation, the Federal Circuit found that these claims “could require the use of a computer as part of Comiskey’s arbitration system.” These claims were found to recite statutory subject matter.

The Federal Circuit explained that the combination of an unpatentable mental process with a machine may produce patentable subject matter: “When an unpatentable mental process is combined with a machine, the combination may produce patentable subject matter, as the Supreme Court’s decision in Diehr and our own decisions in State Street Bank and AT&T have confirmed.” 84 USPQ 2d at 1680. And the Federal Circuit concluded that Comiskey’s claims 17 and 46 (and several dependent claims) claimed patentable subject matter because they combined the use of machines with a mental process.

In the present circumstances, there is no issue of interpretation whether the claim might require use of a computer. Claim 1 explicitly recites “A method performed by a computer . . .”; and independent claim 20 recites “A computer-readable medium having computer code executable by a computer . . .” Since the claims of the present application clearly are limited to a method performed by a computer or to a computer-readable medium having computer code executable by a computer, applicants’ claims clearly are directed to patentable subject matter under In re Comiskey.

The Federal Circuit’s holding in In re Comiskey is dispositive of the question before us. The rejection of the present claims as directed to unpatentable subject matter is inconsistent with the Federal Circuit’s holding and therefore should be withdrawn.

A comment is appropriate concerning the specific grounds for the unpatentable subject matter rejection made by the Examiner. The Examiner asserts that no physical transformation is recited in the claims and that the claims are not concrete. Applicants respectfully disagree. The claims require the mathematical calculation of a bid/ask quote based on asset price data, quote

request information, current system position information and target position information. The details of this mathematical calculation are set forth at great length in Section 3, paragraphs 0037 to 0122 of the specification. In several decisions the Federal Circuit has found that mathematical calculations are a transformation of data sufficient to constitute patentable subject matter. As the Federal Circuit stated in State Street Bank & Trust Co. v. Signature Financial Group 149 F.3d 1368, 47 USPQ 2d 1596, 1601 (Fed. Cir. 1998):

“In *Alappat* [33 F.3d 1526, 31 USPQ 2d 1545 (Fed. Cir. 1994)], we held that data, transformed by a machine through a series of mathematical calculations to produce a smooth waveform display on a rasterizer monitor, constituted a practical application of an abstract idea (a mathematical algorithm, formula, or calculation), because it produced ‘a useful, concrete and tangible result’—the smooth waveform.

Similarly, in *Arrhythmia Research Technology Inc. v. Corazonix Corp.* 958 F.2d 1053, 22 USPQ2d 1033 (Fed. Cir. 1992), we held that the transformation of electrocardiograph signals from a patient’s heartbeat by a machine through a series of mathematical calculations constituted a practical application of an abstract idea ( a mathematical algorithm, formula, or calculation), because it corresponded to a useful, concrete or tangible thing – the condition of a patient’s heart.

Today, we hold that the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation, because it produces ‘a useful, concrete and tangible result’—a final share price momentarily fixed for recording . . .”

In the present application a bid/ask quote is generated by mathematical calculations from several data inputs. Just as the transformation of data by mathematical calculation was found to constitute patentable subject matter in *Alappat*, in *Arrhythmia* and in *State Street*, so to the transformation of data by mathematical calculation constitutes patentable subject matter in the present application.

With respect to the Examiner’s argument that the claims are not concrete, this seems to be based on the conclusion that the results are not reproducible because different trading models and hedging methods could be used in the practice of the claim. In the first place, the word “concrete” does not mean “reproducible.” Webster’s Ninth New Collegiate Dictionary, p. 273 (Merriam-Webster 1991) defines “concrete” to mean “real, tangible.” While the Patent Office’s Interim Guidelines may define concrete as reproducible, no support is given for this definition. Secondly, merely because different trading models and hedging methods could be used in the practice of the claims does not mean that the method recited in the claim is not reproducible. If

the same trading models and hedging methods are used with the same input data, the results will be the same.

As emphasized above, the controlling case is In re Comiskey. Since applicants' claims are clearly limited to a method performed by a computer or to a computer-readable medium, the rejection of the claims under 35 U.S.C. 101 should be withdrawn.

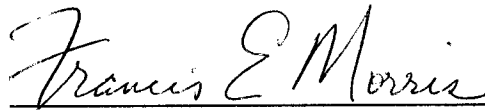
For the foregoing reasons, the claims of the present application are believed to be in condition for allowance. Such action is respectfully requested.

No additional fee is believed to be due for filing this response. However, if a fee is due, please charge such fee to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310.

If the Examiner believes a telephone interview would expedite prosecution of this application, he is invited to call applicant's attorney at the number given below.

Respectfully submitted,

Date: April 16, 2008

A handwritten signature in cursive script, reading "Francis E. Morris", written over a horizontal line.

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